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EDITORIAL

★

GROWTH

THE Amateur population of Aus-
tralia is growing. From some
3,000 in 1957, it is now over the
4,000 mark in 1961—this is quite a
spectacular increase by all standards,
but it may be even more surprising
to learn that in other countries, such
as Japan, the growth has been even
more prolific. There, in a period of
some three years, the population has
grown from 3,500 to over 6,000—
nearly double. In approximately
the same proportions, the W.I.A. and
the J.A.R.L. have also increased their
memberships, but the Institute has
now lost its status as the largest
Amateur Society in Region 3. Our
aim should be to reclaim that status.

The popular catch phrase—"It
pays to advertise"—has always been
enunciated as a healthy policy of
the Institute, but it was substantiated
with a vengeance a few weeks ago.
It started from a short article on
Amateur Radio in the January Reader-
er's Digest. This excellent publica-
tion has a wide distribution through-
out Australia and its articles are read
by thousands of people and it was
gratifying to the Institute that nearly
70 of its readers wrote asking for
more details of our universal hobby.
These enquirers were widely spread
throughout the Commonwealth, and
such a response to one short article
was unexpected. Naturally your
Executive took this opportunity to

endeavour to recruit some new mem-
bers from those interested enough
to enquire.

This wonderful response produced
a counter reaction—it pointed out
that there are still many citizens in
Australia and elsewhere who have
no idea at all what Amateur Radio
means or represents. Whilst it is
always pleasant to receive free pub-
licity from unsolicited sources, the
matter rests squarely on our own
shoulders to promote our own ad-
vertising and recruit drives. The
Divisions have done a good job in
the last few years in maintaining
our membership and in most cases
of increasing it. However, no one
would be foolish enough to say that
more could not be done in this
direction.

If our Institute, the oldest Amat-
eur Radio society in the world, is to
maintain the status we hold and to
continue to grow, we must be pre-
pared to engage in even more stren-
uous efforts to obtain new members.
If every member of the Institute
publicises the work and worth of the
Amateur in his business and social
activities, and obtains only one new
member, then our present strength in
a very short time will be doubled.
The veracity of the phrase—"It pays
to advertise"—will then be ideally
demonstrated.

FEDERAL EXECUTIVE.

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HIGH STABILITY V.F.O's. OF RECENT DESIGN*

YUIFR introduces Amateurs to some new European ideas on extremely stable v.f.o's.

TIMA POPOVICH, YUIFR, ex-YUTBJ

In spite of the wide commercialisation of Ham gear these days, there are still enthusiasts who prefer to build their rigs at home. But, if only for the sake of our own edification, it will do no harm to discuss a few of the recent improvements in oscillator design, in some detail.

The problem of obtaining high frequency stability in variable frequency oscillators always presents a hard nut to the constructor, and not only to the Amateur constructor. No wonder that many efforts were made throughout the years, particularly since W.W. II. (both by Amateurs and Manufacturers) to develop and improve oscillator design in such a way as to approach stability characteristics close to those of crystal controlled oscillators.

There are a few oscillator types, developed experimentally by the laboratories of some radio manufacturing firms, in which frequency stability in continuous operation goes up to ± 0.001 per cent. Because of their great stability and relatively simple design, these devices are quite tempting to the Amateur builder, too. Of course, built with Amateur resources, similar devices will be less perfect, but still superior to the conventional oscillators.

Basically, all these circuits are of the electron coupled type with certain experimentally developed improvements.

CZECHOSLOVAK OSCILLATOR

The Czechoslovak "Tesla" laboratories have developed an oscillator which presents considerable improvements over the popular series tuned Colpitts (better known as the Clapp circuit). Just as in the case of the Clapp, the coupling between the oscillating tank circuit and the tube is very loose. However, an important improvement is the fact that, unlike the Clapp, not only is the input capacitance of the tube shunted by capacitors of large value, but also the other interelectrode capacitances. This results in better stability by eliminating tube interelectrode capacity changes, as well as changes due to fluctuations of electrode voltages.

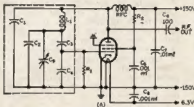
This oscillator is characterised by a remarkable frequency stability and low harmonic content, as well as constant output power over an extended frequency range.

The high stability of the "Tesla" oscillator offers the possibility of building it for any desired band without resorting to frequency doubling or tripling, usually necessary in compact mobile equipments.

The schematic diagram and component data, as presented by the Roumanian magazine¹ are shown in Fig. 1. The tuned circuit data is listed in the table.

Tuning is accomplished by the variable capacitor C9. Better results are obtained by using a ganged, double section capacitor, whose second section C10 should be connected across C1. This, however, involves more complicated construction. The range of bandspread depends upon the values of the capacitors C1, C2, C3, C4 and C9.

Coil inductances are adjusted by powdered iron cores. The Table contains data for six different Amateur bands, and the values for the 72-73 Mc. frequency range are given to make possible the coverage of the 144-146 Mc. band by doubling in a subsequent stage.



acitor (from oscillator plate to the following stage) should not exceed 100 pF in value.

For break-in operation the oscillator may be keyed in the cathode circuit.

For the 72-73 Mc. band, C4 is the tuning capacitor.

CLAPP-FRANKLIN OSCILLATOR

Another factory conceived high-stability oscillator, successfully built and employed by some European Amateurs, is the so called Clapp-Franklin oscillator, developed by the German Telefunken laboratories.²

As the name itself indicates, this design combines the good properties of

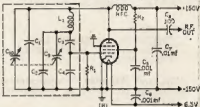


Fig. 1—The "Tesla" oscillator circuits and L/C charts developed in a Czechoslovak laboratory. Circuit A uses a single tuning capacitor while B employs a dual unit, C9 and C10.

Band Mc.	L ₁ μH	No. of Turns	Wire Gauge No. B & S	Tuning with Single Capacitor C ₉						Tuning with Two Gang Capacitor C ₉ -C ₁₀					
				C ₁ mmf	C ₂ mmf	C ₃ mmf	C ₄ mmf	C ₅ mmf	C ₆ mmf	C ₁ mmf	C ₂ mmf	C ₃ mmf	C ₄ mmf	C ₅ mmf	C ₆ mmf
1.8—3.0	23.0	46	30	865	30	4800	470	550	500	25	5000	850	115		
3.5—5.5	13.0	33	25	295	20	2600	250	125	245	12	2300	515	75		
6.8—7.15	7.0	24	24	140	10	1470	130	11.0	154	7	1030	155	0*		
14.0—14.35	3.5	17	27	68	5	700	68	11.0	82	3	600	37	7		
21.0—21.45	2.5	14	20	44	3	475	37	5.5	41	2	550	38	7		
28.0—29.7	1.7	12	18	31	2	308	20	11.0	38	2	310	21	7		
72.0—73.0	0.7	7	14	8.2	—	180	2.8	1.0	7	—	150	3.8	3		

* L₁ wound on 15 mm. diameter form (0.5905 inches).

* Original article shows C₆ as 0 mmf. This is probably an error, suggests Timu, and should be in the vicinity of 10 mmf.

Table 1—Component values for the single and double tuned Tesla oscillators shown in Fig. 1. The 72-73 mc range is provided for doubling, in a subsequent stage, to the 144-146 mc band.

Tubes recommended are 6AK5, 6AC7 or similar types. Certain dual triodes may also be used. In this case, one of the triodes serves as the oscillator, while the other one is used as an amplifier. For good results, only high quality components should be used.

The tuned circuit is housed in a shielded box. Special care must be taken to provide mounting of the components to permit spacing the coils well away from the sides of the box (at least two times the diameter of the coil), to prevent drastic reduction of its Q by the shielding.

Resistor R2 is chosen within the limits of 1,000-10,000 ohms. Upon its value depends the coefficient of harmonics at the oscillator output.

The value of R1 is chosen between 27,000-75,000 ohms. The coupling cap-

acitor and Franklin oscillators into one unit, tending at the same time to minimise their respective deficiencies.

The Franklin circuit, shown in Fig. 2(A) contains two tubes, one of which acts as the oscillator proper, while the second one serves as an amplifier and phase inverter. Values of the components are chosen so as to ensure a very loose coupling between the oscillating tank circuit and the tube, just as in any high stability unit. As a result of the negligible influence of the tube elements on the frequency generating tank circuit, the frequency stability of the Franklin oscillator comes comparatively close to that of a crystal controlled unit. The amplified feedback voltage

* Reprinted from "CQ," December, 1960.

1 "Radiomatorul," February, 1957, p. 24. Official publication of A.V.S.A.P., Bd. Dania 13, Bucharest, Roumania.

2 YOSFT, "Radiomatorul," March, 1957, p. 16.

As shown in Fig. 2(C) the feedback voltage is not applied to the grid of the oscillator tube, as in the Franklin circuit, but to the junction of the two

voltage dividing capacitors, C1 and C2. The use of the conventional parallel tuned tank circuit produces a constant output power over a broad frequency range. This in turn provides level excitation of the following stages.

Fig. 2(D) shows the schematic of the tried and proven oscillator developed at Telefunken.

The resonant tank circuit is tuned to 3.5 Mc. The output power is approximately 1 volt effective, and output impedance is 100 ohms. For better thermal compensation, C1 is made up of combination of two parallel ceramic condensers, 15 pF. and 35 pF. respectively.

Tubes V1 and V2 may be triodes, or triode connected pentodes. A dual triode having separate cathodes can also be used.

Tube V3 is a high conductance pentode in a cathode follower circuit. The plate of this tube is shorted to ground for r.f. by a 5,000 pF. ceramic capacitor. Capacitor C2 is also ceramic, while C3, C4 and C5 are micas.

For the required inductance of 21 μ H, the oscillator coil should be 25.5 turns of No. 24 wire on a ceramic form 1½ inches in diameter.

For wiring, No. 18 (or larger) wire is recommended. Particular care should be given to mechanical stability and rigidity of the entire unit, as well as to the quality of the components.

The unit should be placed in a metal box, lined with two or three layers of heat insulating material.

RADOSLAV CIRCUIT

The v.f.o. circuit to follow is an Amateur design presented by Radoslav in the "Radioamater" magazine,³ the official publication of the Yugoslav Amateur Radio Union (S.R.J.).

Figures 3(A) (B) and (C) illustrate how subsequent improvements were developed in the famous e.c.o. and Clapp circuits, by retaining and combining their desirable properties.

The resulting oscillator circuit has a crystal-clear note of constant pitch, excellent frequency stability characteristics and the device is easy to build.

The improvements in the e.c.o. and Clapp circuits are as follows:

(a) In the Clapp circuit, the capacitive voltage divider connected between the grid and ground does consume a certain amount of the already small energy available at the grid. In the newly developed circuit the cap-

active voltage divider is connected between the plate of the oscillator tube and ground. The amount of r.f. energy available at the plate being much higher, the possible effect of losses upon the circuit are of little consequence.

(b) In the Clapp circuit the suppressor grid serves as an electrostatic shield inside the tube, provided a pentode is used. In this circuit this is accomplished by the control grid with improved frequency stability.

(c) In the Clapp circuit the capacitances forming the capacitive voltage divider reach 1,000 pF. in value, while in this circuit they are of 2,000 pF. each. This insures a better cancellation of the results of changes in interelectrode capacitances during operation.

(d) In the Clapp circuit only the grid to cathode capacitance is shunted by a large capacitor, while in this circuit changes in all the interelectrode capacitances of the tube (grid-vathode, grid-plate, plate-cathode) are cancelled out.

(e) The working quality of the Clapp circuit, according to its designer:

$$N = 10 \sqrt{\frac{9 G_m Q}{f C_m}}$$

while in this circuit:

$$N = 10 \sqrt{\frac{9 G_{\text{mj}}}{f C_2}}$$

Where: N is quality of the circuit.

On la tube transconduccion

Q is the quality factor of the inductance.

f is the operating frequency,

C_u is the resulting capacitance of the capacitive voltage divider and minimal capacity of the series tank circuit.

μ is the amplification factor of the second tube

Reference to the above equations indicates that, in this circuit, the highest usable frequency, conditions and quality of the components being equal, is considerably higher than with the Clapp.

Further advantages of this circuit in comparison with the conventional types of oscillators follow:

- ★ The cathode coupling system insures a very strong feedback of the current type, which is constant over a broad frequency range;
- ★ The output voltage has a medium amplitude of purely sinusoidal shape;
- ★ The separation is purely electronic;
- ★ The stability of the unit is comparable to that of a crystal controlled unit.

Fig. 3(C) shows the effective circuit diagram of the v.f.o.

It works on the following principles: When the high voltage is applied, oscillations will take place in the series tank circuit LC. Since the two 2,000 pF capacitors (which serve to nullify changes in interelectrode capacity) are connected across the tank circuit, a current flows through the resulting capacitive voltage divider, bringing about a voltage drop equal in value but opposite in phase, across each of the capacitors. The point at which the magnitude of V2 is connected to the capacitive voltage divider the h.f. potential is zero. Since the voltages at the extrem-

(Continued on Page 7)

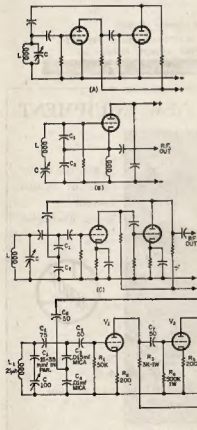


Fig. 2—A—The basic Franklin circuit. B—The basic Clapp circuit. C—Fundamental circuit of the combined Clapp-Franklin oscillators. D—The circuit of the Clapp-Franklin oscillator as developed at Telefunken.

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D.C. Output Power: 60 watts maximum.
D.C. Input Current: 5.9 amps. at 60W. output.
D.C. Output Voltages (14 V. in.): 400, 300, 200 or 150 V.;
400 & 200 simultaneously or 300 & 150 simultaneously.
D.C. Output Current: 150 mA. maximum total from full
and half voltage taps or 150 mA. each if switched to
alternate loads.

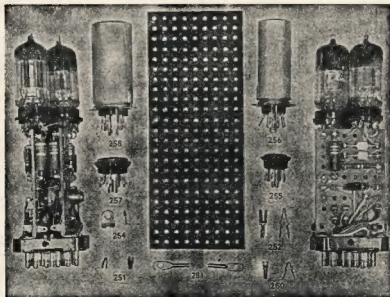
Efficiency: 78% at 60 watts output.
Operating Frequency: 1 Kc/s.
Maximum Operating Temp. (i.e. ambient air temp. at
point of installation) 150°F. (approx. 65°C.).
Filtering: Adequately filtered in full voltage output
lead and provision for filtering in half voltage output.
Dimensions Overall: 8 in. x 3½ in. x 3¼ in.
Mounting: Universal type.
Full Instructions and Circuit Diagrams supplied.

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THE SCR522/542-A V.H.F. EQUIPMENT

PART TWO

A. G. MULCAHY,* VK2ACV

SUGGESTED MODIFICATIONS

Many modifications to the 522 have been proposed over the past years and personal requirements must govern your approach to the matter.

The first decision must be whether to leave the units mounted in the case (type CS80) or to remove them and provide alternative mounting. Is the unit to be used portable or mobile or fixed? Is speaker or phones operation desired, etc., etc.? Everyone will have his own ideas on these points and no doubt will have ideas not stated here; however . . . !

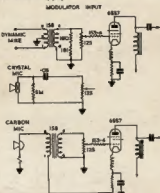
The power unit, controller and rack are of very little use from an Amateur viewpoint and may be scrapped for parts.

The transmitter and receiver may be removed from their original case and operated upon.

The channel selecting slide assembly will need to be removed from the receiver, but may be retained on the transmitter if only one frequency is to be used. Any one of the slide bars may then be lock-wired in the actuated position and the transmitter heads tuned and locked in reference to this slider. The original crystal switch and its wiring may be removed and the crystal may be mounted close to the oscillator tube socket.

The r.f. indicator tube is an optional luxury, it is better removed if the unit is for portable or mobile use.

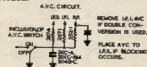
The modulator will need cathode bias if a fixed bias supply is not used, some 15v. bias is normally provided by the fixed bias supply.



The audio oscillator facility may be removed from the modulator speech amp. circuitry if not required and the whole of the grid circuit of this stage may be simplified by removing all components except the 1 meg. pot. (number 125) and having its wiper connect to the 6BS8's grid using a crystal microphone. A dynamic mike may be used by retaining transformer No. 158 under its original connection arrangement and feeding the microphone to terminals 1 and 3 of this transformer.

The transmitter Jones plugs, undesired relays and circuit wiring may all be removed. Power connections may be made via an octal socket and plug combination at the power unit.

A co-axial socket may be used in lieu of the two-pin jack or alternatively a 300 ohm ribbon feed may be used and banana plugs employed to connect to the two-pin jack. If the original rack is discarded, an alternative aerial change-over relay must be provided.



An 0-1 mA. meter may be mounted on the front panel of the modified transmitter and wired to the meter socket on the transmitter unit.

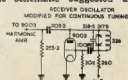
The receiver unit will need to be converted to continuous tuning. To do this, firstly, remove the sliding bar channel selection assembly and use some parts thereof to enable a 1 inch shaft extension to be attached to each tuning head. Decide the form of panel system desired. For a 19 inch panel, proceed as follows: Mount the receiver centrally on a 19 x 7 inch panel. Drill the following holes on the panel for

the following components: Volume control pot., noise limiter switch, a.v.c. switch, S meter switch, transmit-receive switch (may alternatively mount on the power unit panel), phone-speaker jacks, S meter and r.f. tuning head control shaft and last of all the oscillator tuning head control shaft.

It is as well to note that the 2 metre bandspread available on the SCR522 is very limited indeed. It is therefore advised that considerable oscillator tuning vernier facility be provided. This is most easily provided by a small diameter shaft—large tuning drum—dial cord, combination. This will give reasonable control over oscillator tuning. A vernier dial such as is available on the TU series tuning units is ideal for use on the r.f. tuning head.

Having fixed the mechanical aspects, we can proceed with the electrical side of things. This operation requires the whole receiver front-end be removed from the unit. Five screws, the tuning shafts, some earthing straps and an r.f. shield plate hold this assembly in the chassis. About ten minutes' work should see it out.

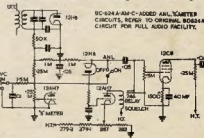
Modify the 9002 circuitry according to the schematic suggested and the



harmonic amp. stage is now our local oscillator, covering 83 to 144 Mc. and enabling the full 100 to 156 Mc. coverage to be had. The r.f. tuning will go below 100 Mc. and by fitting a discriminator and keeping the local oscillator above the incoming signal, it is possible to tune the f.m. band. On a sample unit, without altering the coil spacing, tuning was possible from 85 Mc. to 156 Mc. overall.

Receiver components which can be removed are the crystal sockets, oscillator plate load coils, transformer 285 and its associated wiring, and most of the audio system following the second detector stage. A suggested schematic diagram is given as a guide to what could be done.

A suitable source of h.t. and 12v. filament power must be provided. This may be taken from a separate h.t. sup-



Next decide how you want the units encased or mounted. A false front panel may be added to both transmitter and receiver. A standard 19 inch panel, set on brackets, will enable the units to be rack mounted, with a power supply, transmitter, receiver and speaker panel forming a neat v.h.f. combination unit. An alternative method is to enclose the units in cases salvaged from the TU-5 tuning units, ex the 2C375 transmitter. These are a bit of a tight fit though. No doubt some chaps will prefer to leave the units in the original case!

Having decided the mechanical form required, we can proceed with the needs—fix the tx oscillator to suit your needs, add a crystal selector switch if you're loaded with rocks!

Grid leak bias may be substituted for the existing fixed bias arrangement on the 12A6 tripler and both 832s. If you do this, don't forget a little protective cathode bias for the 832s also.

If you remove the slide tune assembly, you can extend the transmitter tuning heads, using sections of the removed slide bar assembly and 1 inch shafting and add individual tuning knobs to enable fine trimming and retuning of the transmitter at all times.

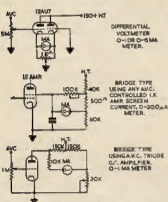
* 46 Leslie Street, Padstow, N.S.W.

ply having a change-over switch system to enable transmit and receive operation.

A word or two of warning! Don't strain the ceramic shafts on the tuning condensers in the receiver. They will break if handled roughly. Run the equipment on lower than 300v. h.t. rather than above this figure as the condensers fitted in a lot of 522s are very prone to voltage failure.* If you modify the receiver for continuous tuning, don't fail to disconnect condensers 202.13 and 202.14 or else you'll get no oscillation. Try to obtain correctly sized Bristo keys to remove the tuning head flexible couplings as substitute tools usually ruin the grub screw. The output transformer may be replaced by a 3.2 ohm output transformer. If this is done, remember transformer 296 contains an h.t. choke and if removed the h.t. line must be rejoined.

If you possess a BC624C receiver, practically no modification of the receiver audio will be required. The interphone transformer 295 may be removed and if desired an extra tube may be added to operate an S meter—see suggested circuit.

5th METER CIRCUITS



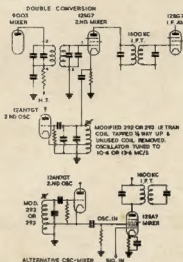
The BC624AM receiver may be further improved by using the 12J5GT 2nd audio stage as a voltage amplifier to drive a power output stage employing a 12A6, 12AQ5, etc. This may be accommodated in 295's position. The crystal oscillator half of the 12AH7GT is available for S meter use.

The BC624A requires most modification and perhaps the best approach here is to modify it to BC624C standard, plus extras to your own desire.

Double conversion may be included by removing 296 and substituting 292 or 293 to this position. Modify one of the i.f. windings of the re-located i.f. by providing a tap on the winding. Use the modified winding to provide a second local oscillator by (a) using a triode-hexode or multi-grid converter tube in place of the 2nd i.f. amplifier (12SG7), (b) use the 4, 5, 6 section of the osc./squench 12AH7GT twin-triode as a "hot cathode" Hartley oscillator and use cathode injection to the 12SG7 2nd i.f. amp. for mixing.

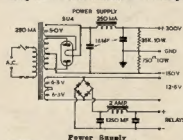
Remove all 12 Mc. i.f.s. other than 291 and install a 1600 Kc. i.f.t. in each of the three vacated positions. Dis-

connect the a.v.c. feed to the new mixer stage, but retain the original mixer stage of 1600 Kc. i.f. If any tendency towards blocking becomes apparent in operation, apply partial a.v.c. to the second 1600 Kc. i.f. amplifier. A 455 Kc. i.f. could be used instead of 1600 Kc. If this is done, pay attention to the second oscillator stability or, alternatively, provide a small trimmer facility for oscillator drift correction. If excessive selectivity is apparent using 455 Kc. i.f.s, stagger tune the 455 Kc. train.



In the event that you prefer to build rather than modify equipment, the 522 is still a good buy! A host of good quality components may be salvaged—the modulation transformer and driver transformer are an ideal mobile combination. Components ex 522s have been used in g.d.o.s., oscillators, monitors, transmitters, etc., etc. Coils 227.1-4 are excellent 7 Mc. coils!

If you have any queries on components or circuit parameters, or if you require further information on this equipment you may write to me [enclosing a stamped addressed envelope.—Ed.] and I will endeavour to help.



Power Supply

NOTE:—

1. If fixed bias retained in transmitter, use circuit shown with 365-0-365v. transformer.
2. If grid leak bias used in transmitter earth transformer centre tap and first electrolytic and omit 750 ohm resistor, use 285-0-285v. transformer.
3. Use selenium or silicon rectifiers for relay supply. Remove all relay earth returns and complete relay circuits via common negative line. Both relay positive and negative lines must be above earth.

GENERAL CHARACTERISTICS AND INFORMATION

Transmitter Metering

Switch Position	Reading Obtained	Normal
1	1st harm. amp. plate	0.4
2	2nd harm. amp. plate	0.5
3	Power amplifier plate	0.63
4	R.F. diode—if fitted	0.3-0.5
5	P.A. grid current	Full scale

Receiver Selectivity

The receiver i.f. selectivity is such that a bandwidth of 110 Kc. exists for 6 db. attenuation. 20 db. attenuation results at 90 Kc. either side of resonance, whilst 40 db. attenuation is achieved 130 Kc. from resonance.

Receiver Sensitivity

The receiver sensitivity over the tuned range averages 3.3 to 6 microvolts for 10 mW, output at 10 db, signal to noise ratio.

A.V.C. Characteristic

The receiver audio output will not vary in excess of +6 db. for a change in signal input from 20 to 100,000 microvolts under normal conditions. An output variation of +12 db. is given as the maximum acceptable test figure. The output at 20 microvolts input is rated as 0 db.

Image Rejection

The image rejection ratio at 145 Mc. is given as 17,000 to 1.

Transformers

A.F. Input 295: Prim. 1—pins 1 and 2; d.c. resistance 920 ohms; $Z = 250,000$ ohms. Receiver audio input.

Primary 2—pins 3 and 4; d.c. resistance 6.9 ohms; $Z = 750$ ohms. Dynamic mike intercom. input.

Secondary 1—pins 5 and 6; d.c. resistance 2,450 ohms; $Z = 1$ megohm. Grid drive.

Audio Output 296: Primary—pins 1 and 2; d.c. resistance 870 ohms; $Z = 15,000$ ohms. Plate load.

Tapped Secondary—pins 4, 5, 6 and 7; d.c. resistance 390 ohms; Z terms. 4-7, 4,000 ohms; terms. 4-6, 300 ohms; terms. 4-5, 50 ohms. Audio output.

H.T. choke—pins 2 and 3; h.t. filtering, 6 H., 340 ohms d.c. resistance.

Mike Input 158: C.T. primary—pins 3-2-1; Z = 200 ohms; d.c. resistance 5.2 ohms. Centre tapped microphone input.

Secondary—pins 5-4, $Z = 420,000$ ohms; d.c. resistance 4,000 ohms. Grid drive, 60 cycle test, ± 2 db, 300-3,000 cycles. Level—40 db.

Interstage Audio 159: Primary—pins 2-1. $Z = 125,000$ ohms; d.c. resistance 1,050 ohms. Shunt plate load.

C.T. secondary—pins 3-4-5. Z = 500,000 ohms; d.c. resistance 2,750 ohms. Push-pull grids. 60 cycle test, ± 2 db. 400-3,000 cycles. Level 0 db.

Modulation Transformer 160: C.T. primary—pins 3-2-1. Z = 22,000 ohms; d.c. resistance 690 ohms.

Secondary—pins 4-5. $Z = 5,500$ ohms; d.c. resistance 170 ohms.

Relays

130: Slow release relay. No information available.

131: D.p.d.t. and s.p.s.t., 150 ohms.
12v. d.c., normally de-energised, con-
tactor (m.c.w. tone) relay.

*It is a wise precaution to test all condensers before using.—Ed.

181: S.p.s.t. 200 ohms. 12v. d.c., opens when energised, press to transmit control.

412: D.p.d.t., one section has extra contact to ground receiver on transmit. 150 ohms, 12v. d.c. Antenna change-over.

248: S.p.s.t., 5,000 ohms. 4 mA. operates with current change of 0.2 mA. Squelch relay.

411.1 and 2: 13½v. d.c. Locking. S.p.d.t. .1 locking relay, 2 motor control.

Next time I will discuss the MN26 Compass equipment. Anyone having a pet-mod. he'd like to pass on could drop me a line and it will be included.

As it is intended that this series of articles, describing disposals equipment should provide for the maximum demand, you are requested to write me if you wish a particular unit to be featured. The list of available information covers most popular releases, so drop a line and state your needs. ●

BOOK REVIEWS

A.R.E.L. ANTENNA BOOK

A most comprehensive treatise on Amateur antennae. 318 pages packed with all the latest information on antennae and matching systems for fixed and mobile stations.

The 1960 edition is one of the standard A.R.E.L. publications which is revised from time to time. It is a book which should be in the library of every Amateur. Published by the A.R.E.L., Australian price 31/- plus 1/6 postage. Our copy from McGILL's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

SURPLUS RADIO CONVERSION MANUAL, VOL. 3

For a number of years I have had Volumes 1 and 2 in my library and I have found their cost low in relation to their value as they give much valuable information on a large number of items which are available on the Australian disposals market.

This new volume goes into more detail on a lot of modifications that are not covered in the other volumes. Almost forty disposals items are covered including the conversion of a BC458 into a phasing type s.s.b. transmitter capable of over 100 watts peak power output on 3.5 or 14 Mc.

Published by Editors and Engineers of U.S.A. and edited by William I. Orr. Australian price 33/6 plus 1/- postage. Our copy from McGILL's Authorised Newsagency, 183 Elizabeth St., Melbourne, Vic.

★

"A Guide to Amateur Radio"

Copies of the eighth edition of this excellent publication of the Radio Society of Great Britain are available from the Federal Treasurer, Bob Boase, VK3NI, 65a Franklin Street, Melbourne, at 5/-, post paid. Among the subjects covered are design and operation of communications receivers (including suppressed carrier reception), power supplies, transmitter design and operation, keying, telephony, aerials, frequency measurement, and other aspects of Amateur operation. There is also a great deal to interest the beginner and the person contemplating breaking into Amateur Radio.

HIGH STABILITY V.F.O.'s. OF RECENT DESIGN

(Continued from Page 3)

ities of the series tank circuit are opposite in phase, the control grid of V2 is opposite in phase with the plate of V1.

The voltage at the control grid of V2 changes its bias, and after being amplified in the cathode circuit, excites V1, which inverts the phase and acts as a grounded grid amplifier. After the phase inversion, the h.f. oscillations are added to those of the plate circuit of V1 and boost the oscillations in the LC circuit. The h.f. output can be drawn through a 100 pF. capacitor from either the plate of V1, or that of V2. If the output of V2 is to be used, the tank circuit LIC1 can be tuned to any desired higher harmonic of the fundamental frequency. In this latter case, V2 serves either as a buffer, or as a frequency multiplier. A resonant choke can be substituted for the LIC1 tank circuit if preferred.

Fig. 3(D) presents the same circuit using pentodes instead of triodes.

It is desirable, although not a strict necessity, to use voltage stabilisation in power supplies with all the above v.f.o. units. ●

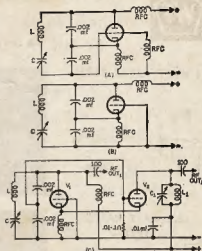
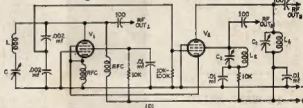


Fig. 3—A—B—C—The development steps in the oscillator designed by Baker Radwiler. Output may be taken from V₁ or V₂ as explained in the text. D—A pentode version of the oscillator shown in C above.



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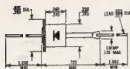


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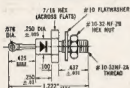
1 WATT RATED TYPES



All dimensions in inches



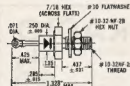
3.5 WATT RATED TYPES



All dimensions in inches



10 WATT RATED TYPES



All dimensions in inches



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Ratings and Characteristics at 25°C Ambient

ZENER TYPE	WFL TYPE	ZENER VOLTAGE RANGE VOLTS	TYPICAL DYNAMIC RESISTANCE		IF MAX.	NOMINAL TEMP. COEFFICIENT $\%/^{\circ}\text{C}$
			ϕ IS MAX.	IF (OHMS)		
1N1518	1Z 3.9	3.6-4.3	50	9	250	-0.04
1N1519	1Z 4.7	4.3-5.1	40	8.5	200	0
1N1520	1Z 5.6	5.1-6.2	35	5.5	175	+0.03
1N1521	1Z 6.8	6.2-7.5	30	1.6	150	+0.05
1N1522	1Z 8.2	7.5-9.1	25	1.1	120	+0.06
1N1523	1Z 10	9.1-11	20	1.1	100	+0.07
1N1524	1Z 12	11-13	15	2.4	80	+0.075
1N1525	1Z 15	13-16	13	5.4	65	+0.08
1N1506	1Z 18	16-20	10	11	55	+0.085
1N1527	1Z 22	20-24	9	18	45	+0.09
1N1528	1Z 27	24-30	7	28	35	+0.095

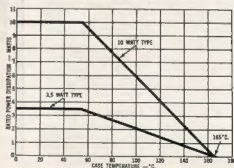
RATINGS AND TYPICAL CHARACTERISTICS

ZENER TYPE	WFL TYPE	ZENER VOLTAGE RANGE VOLTS	TYPICAL DYNAMIC RESISTANCE		IF MAX.	NOMINAL TEMP. COEFFICIENT $\%/^{\circ}\text{C}$
			ϕ IS MAX.	IF (OHMS)		
1N1588	3Z 3.9	3.6-4.3	150	2.6	850	-0.04
1N1589	3Z 4.7	4.3-5.1	125	2.3	700	0
1N1590	3Z 5.6	5.1-6.2	110	1.4	625	+0.03
1N1591	3Z 6.8	6.2-7.5	100	.58	525	+0.05
1N1592	3Z 8.2	7.5-9.1	80	.5	425	+0.06
1N1593	3Z 10	9.1-11	70	.7	350	+0.07
1N1594	3Z 12	11-13	50	1.4	275	+0.075
1N1595	3Z 15	13-16	40	3.4	225	+0.08
1N1596	3Z 18	16-20	35	6	200	+0.085
1N1597	3Z 22	20-24	30	9	160	+0.09
1N1598	3Z 27	24-30	25	13	125	+0.095

RATINGS AND TYPICAL CHARACTERISTICS

ZENER TYPE	WFL TYPE	ZENER VOLTAGE RANGE VOLTS	TYPICAL DYNAMIC RESISTANCE		IF MAX.	NOMINAL TEMP. COEFFICIENT $\%/^{\circ}\text{C}$
			ϕ IS MAX.	IF (OHMS)		
1N1599	10Z 3.9	3.6-4.3	500	.84	2500	-0.04
1N1600	10Z 4.7	4.3-5.1	400	.68	2000	0
1N1601	10Z 5.6	5.1-6.2	350	.3	1750	+0.03
1N1602	10Z 6.8	6.2-7.5	300	.2	1500	+0.05
1N1603	10Z 8.2	7.5-9.1	250	.25	1200	+0.06
1N1604	10Z 10	9.1-11	200	.55	1000	+0.07
1N1605	10Z 12	11-13	170	.95	850	+0.075
1N1606	10Z 15	13-16	140	1.5	680	+0.08
1N1607	10Z 18	16-20	110	2	550	+0.085
1N1608	10Z 22	20-24	90	3	450	+0.09
1N1609	10Z 27	24-30	70	4.5	350	+0.095

Derating
of power
Dissipation
vs.
Case
Temperature
3.5 watt
and 10 watt
series.



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11th ANNUAL CONVENTION OF N.S.W. DIVISION, W.I.A.

SUCCESSFUL THREE-DAY GATHERING

The 11th Annual Convention of the N.S.W. Division was held over the week-end of January 27-28-29, commencing with the general meeting at Science House, Gloucester Street, Sydney, at which there were quite a few who did not normally attend such meetings owing to their geographical locations.

The main part of the Convention took place on the following day at the home of VK2WL, the headquarters station of the N.S.W. Division, located in a bush setting at Dural, some 25 miles from Sydney. The day was perfect, if a little on the hot side, and from early morning there were many helpers on the site assisting in the preparations for the function. Much of the preparation for such an event as this had been done over the period of many months, usually by the few enthusiasts who gather at Dural each Sunday, and it is always pleasing to the Convention Committee to see others arrive early to assist in tying up the loose ends.

Registration commenced at an early hour, the registration tent being manned by Frank 2QL with later arrivals 2AZN, 2ACD, 2EG, R. Morris and his VL. Frank of course also was handing out the QSL cards to those registering. Total registrations for the day were 283 included among which were 30 ladies and 38 children.

The Convention was officially opened by the Divisional President, Bill 2YB, who suitably welcomed members and visitors, some of whom had travelled from distant parts of the State in order to meet many of the friends they have made over the years, and many of whom they had not previously met personally.

Much interest was taken in the large disposal store conducted by the Disposal Committee under the leadership of its chairman, Keith 2ABK, and ably assisted by Barney Smyth and many others during the day's activities. This

section attracted a large crowd during most of the afternoon and the gear available was of excellent quality.

Many excellent and interesting exhibits were arranged, including a stand organised by Harold 2AAH on transistorised equipment of a varied nature. Among the gear he was showing were some fine examples of miniaturised equipment, of course using transistors, which attracted much attention and interest.

The text stand showed some very fine examples of commercial gear shown by Ron 2ALR, ably assisted by his son and ex-VR2DP. This consisted of the latest in Hallicrafters receivers and s.a.b. transmitters, and we feel was responsible for many checking over their small change and making mental notes on the desirability of the possession of these very fine pieces of equipment.

Leo 2AC took the day off from his daily duties to further the interest in s.a.b. among members. He showed a variety of his equipment and demonstrated to all the ease with which DX contacts can be made by the use of this mode. Among his helpers were Harry 2AJZ, Stan 2EL and Don 2ASW, all of whom are known as very keen s.a.b. men and who are all doing their level best to further interest in s.a.b. in this State.

The old timers' exhibit was organised by Joe 2JR, and with the moral support of Wal 2AXH provided a glimpse to the newcomer of what the gear was like in the old days.

Another display was organised by the V.h.f. and T.v. Group and was attended by many of the members of the Group during the afternoon.

The Secretary, Norm 2ALJ, was, of course, in attendance to offer assistance and advice to all and to collect any subscriptions offering.

During the afternoon, almost continuously in fact, the ladies prepared afternoon tea for all and for this very com-

mendable effort we have to thank Mrs. Duff, Mrs. Sobels, Mrs. Heard and Muriel Eagles, better known to all as 2AIA.

As the afternoon wore on, the 800 exhibit opened for the approval of all and again the dispensers of the amber fluid did a magnificent job under difficult conditions. Our helpers on this occasion were Ken 2XS, Ken 2ST and 2AGS.

Following a recess for the evening meal, the evening show commenced, and again the compere was Max 2MF. The first event was a Dutch auction for a Sunbeam steam iron, closely followed by a further Dutch auction for a transistor radio. The auctions were ably conducted by Philip 2ZBB.

The evening quiz was the next item on the programme and consisted of a technical quiz and a general knowledge quiz, the questions for which were nutted out by Harold 2AAH and Tim 2ZTM. The five contestants in each of the sections of the quiz, selected in the draw from the hat, all participated in the prize list for event, the winner of the technical quiz receiving a "Little Nipper" radio, donated by E.M.I. Ltd., and the other four participants received a Compu receiver, donated by the Disposals Committee. The winner of the general quiz received an "Astor Desk" fan, donated by Messrs. Martin de Launay Ltd.; the runners-up received a torch each.

Films followed and were enjoyed by the throng who were present for this part of the programme. For this showing we are indebted to Dave 2EO and Val 2VO.

The President closed this part of the Convention, thanking all who attended.

Sunday dawned a very hot day, the maximum temperature for the day being 108.9 degrees, with possibly a few more degrees to be added in at Dural. This did not deter the mobile boys from taking their part of the function and the bands were quite busy while they



Mobile Contests.



Blindfold Transmitter Hunt.

were working from a radius of more than 20 miles from Dural. All gathered at Dural for lunch and a pleasant afternoon (despite the intense heat) was had by all.

Further thanks to Dave 2EO for the colossal job he did for the show and also as O.I.C Dural; also to Tim 2ZTM and his helpers in the erection of the lighting and maintenance of the lighting plant which was running for most of the day. Our thanks also to those many who worked in the background and whose efforts contributed to the success of this Convention

Our gratitude to the members of the Blue Mountains Section for their work in organising and running the blindfold transmitter hunt again this year, indeed a popular event for both not only the sterner sex, but also the ladies and children.

We are also indebted to the following business houses for their co-operation in donating such a fine prize list and for the technical information provided.

- E.M.I. Ltd., Little Nipper radio;
- Martin de Launay Ltd., Astor Deck fan;
- A.E.I. Ltd., Hotpoint jug;
- O. T. Lempiere Ltd., solder,
- A. G. Healing Ltd., multimeter,
- Mullard Ltd., valves, transistors and technical data,
- A.W.V. Ltd., folders of technical data;
- Lawrence & Hanson Electrics Pty. Ltd., Rola 6H loudspeaker;
- U.R.D. Ltd., two open orders for £2/10/0 each

The co-operation of these firms is much appreciated and illustrated the esteem in which the Amateur fraternity is held.

PRIZE LIST

- Blindfold Tx Hunt—Gents: Graeme Jessop; Ladies: Mrs. Wheaton;
- Boys: Greg Mackay; Girls Susan Adams.
- Tube Identification: 2DN.
- Brass Washers in bottle of Nuts and Bolts: 2OM.
- Series Resistors: 2DN.
- Frequency of H.F. Coil: 2AIA.
- Frequency of V.H.F. Coil: 2AIA.
- Lucky Numbers: Gents, 2AFW.
- Quiz Sheet: 2ZEX, 1st: 2OA, 2nd.
- Most Popular Mobile: 1st, 2ASV; 3rd, 2AAH.
- Merse Contest: 1st, 2EG; 2nd, 2OA; 3rd 2DO.
- Mobile V.H.F./H.F. Contest: 2PM.
- Mobile V.H.F. Contest: 2ZCF.
- Mobile H.F. Contest 2AAH.

REGISTRATIONS

The following registrations were made: VKs 2DN, 2ZDM, 2ZBD, 2ZBX, 2RI, 2ZTM, 2ZNM, 2EO, 2ZFI, 2QL, 2VB, 2ZBB, 2ACO, 2DO, 2AEY, 2ZAL, 2ZCF, 2ZEX, 2XP, 2ZJC, 2ASW, 2AKC, 2ALJ, 2HL, 2MP, 2ZCL, 2AZE, 2BK, 2KO, 2AWZ, 2AFB, 2ZAN, 2AAB, 2DP, 2ALR, 2ZGM, 2AIA, 2AAH, 2ACD, 2AZN, 2NU, 2AWW, 2AXH, 2JR, 2AQF, 2ZDF, 2AKX, 2ZL, 2AFA, 2SK, 2OQ, 2FM, 2RM, 2HZ, 2QA, 2VO, 2DW, 2AYL, 2RJ, 2ZDB, 2VC, 2XS, 2ZEW, 2AHX, 2IV, 2ACK, 2AC, 2AJZ, 2ST,

2ADL, 2AQX, 2AJA, 2EL, 2IC, 2QJ, 2ZK, 2EG, 2ZMC, 2XT, 2FP, 2HC, 2NA, 2OK, 2LS, 2OH, 2AAJ, 2YU, 2OM, 2DM, 2GW, 2BP, 2AKB, 2AVT, 2JX, 2ABK, 2NK, 2EX, 2AAW, 2GE, 2VJ, 2NV, 2ZPG, 2ARA, 2OR, 2CS, 2DY, 2IJ, 2AHR, 2VN, 2APB, 2ZKO, 2PZ, 1ZCA, 2AKB, 2FY, 2GX, 2EI, 2ACQ, 2APW, 2FY, 2TP, 2ZDW, 2CG, 2HO, 2ZCW, 2AGS, 2ANG, 2ON, 2ALA, 2AVJ, 2ALF, 2ZFA, 2KM, 2ASV, 2PM, 2ZPM, 2NG, 2OA, 2ZAB, 2RN, 2ZAF, 2ZDK, 2ASZ, 2ANN, 2OM, 2BQ, 2AIQ, 2AT, 2APQ, 2VL, 2AGR, 2ART, 2ALL, 2ZBS, 2AAF, 2OY, Messrs. Claridge, Gilbertson, Allen, Fury, Hickey, Atherden, Green, Harwood, Keane, McKenzie, Warren, Champion, Harker, Nelson, Smith, Sice, Lehman, Christian, Walker, Gibbes, Osborne, Jackson, Jessup, Taylor, Cronin, Wadland, Carrey, Walker, Risbridger, Lester, Hord, Murray, Rowe, Smith, Aggett, Hand, Sumner, McLachlan, Sutherland, Burns, Giff, Barclay, Pollock, Mrs Sobels.

★

"CALL BOOK MAGAZINE"

The Federal Treasurer again has for sale at £1 post paid, several back numbers (most in near-new condition) of this great directory of Hams. The following are available:

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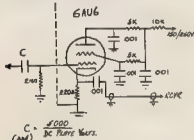
SIDEBAND

Bud Founsett, VK2AQJ
22 Seiffert Court,
Queanbeyan, N.R.W.

T/R SWITCH

One of the problems encountered with fast send-receive systems is the slow speed with which most antenna relays operate. Some operators also object to the loud click-click of the relay. To overcome these difficulties, the electronic send-receive switch has been devised. Most sideband operators are familiar with the "T/R" switch, but for some newcomers there are some important points.

It has been found that, in some cases, connecting the T/R switch in the line to the antenna or antenna coupler caused the received signals to be attenuated. This attenuation is called "suck-out," and is caused by absorption of the signal by the final tank circuit. However, connecting the T/R switch input to the final amplifier tank circuit itself overcomes this "suck-out" effect and gives added selectivity from the tuned circuit.



Unless cut-off bias is used on the final amplifier during reception, noise is generated which will mask all but the strongest signals. This does not present any problems. May I refer you to the Sideband page of "A.R." Oct. '60. The bias network shown there will be of interest.

Fig. 1 shows the circuit that Stan VK2EL and a number of others are using. In explanation, Stan writes: "When no r.f. is present in the final tank, the T/R switch acts as an impedance matching cathode follower, matching the final tank circuit to the receiver input. When the transmitter is on, the small grid current of the 6AU6 tube causes a negative voltage to appear across the 2 megohm resistor, cutting the tube very effectively. A tuned circuit could be used and the output link coupled to the receiver."



Fig. 2—Physical layout of T/R Switch.

Stan reports that the switch works very well for him on all bands. The switch at VK2EL is built in a small shielded box with the grid pin isolated from the rest of the pins by a metal shield. Fig. 2 shows how this is done. Take care to ensure that the electrolytic capacitor "C" has sufficient voltage rating if you connect it to the plate of the final amplifier tube. Complete isolation between input and output of the switch is essential for correct operation.

PERSONAL

Allan VK2EX has made a come-back to sideband this time on the 30 mc band. His transmitter is a 9 Mc. phasing design, using 6AL5

tubes as balanced modulators. A 6AU6 follows as a 9 Mc. amplifier, while a 6AK5 is used as a mixer. Sideband excitation is fed to the cathode of the 6AK5, the v.f.o. signal being injected at the grid. The v.f.o. is a 5 Mc. Commensal transmitter. A 6BY7 tube drives an 813 in a GMA circuit. A 30 mc dipole and a crystal controlled converter into an A8101 complete the installation at Bexley Heath.

On Jan. 18, Russell VK3SX entertained several sidebanders at his home in Toorak. A most enjoyable evening was had and as you may guess, sideband covered the conversation at times. Those present were VK3 ENR, 3WR, 3XB, 302, 3AHR and 2AQJ. It is very pleasant to meet your over-the-air friends face to face.

From South Australia it is often heard the signal of Doug VK3CK. Doug lives at Fullarton, an Adelaide suburb, where he uses an AR25A exciter, a 6BY7A driver and an 813 final. Three 6AC7 tubes are used in the v.f.o. One as oscillator, one isolator and one multiplier. A crystal controlled converter and a Type 19 Mark II receiver take care of reception.

From VK3NN, of Blackwood, in the Adelaide Hills, I have some news of v.h.f. a.s.b. history. Phil tells me that VK3ST worked VK3ADT on 50 Mc a.s.b., way back in 1950. Bob VK3ET was using a h.f. tail filter (7.5 Mc.) and VK3ADT was on air. Seems as though VK3VP must relinquish the first-on-v.h.f.-a.s.b. honour to Bob. Bob and VK3QJ play chess via 50 mc sideband on Friday evenings.

40 METRES AND U.S.B.

"K.W. Viceroy" sideband transmitters are being heard on the various bands. One proud owner being VK3LH, Tom of Lismore, in northern New South Wales. The Viceroy is an English commercial transmitter which sounds very good indeed. It employs a crystal filter and has 100 watts p.a.p. available in five bands—30 to 10 metres. Lower sideband is available on 80 metres, whilst upper sideband is transmitted on all other bands. As 40 metre operation in Australia usually calls for lower sideband, this may be considered a shortcoming in this transmitter.

If after calling CQ on 40, you are answered by a sideband station this will not receive, try the u.b. selector switch in the u.s.b. position. After you have established contact, change your own transmitter to u.s.b., if this is possible. There is nothing wrong in transmitting than trying to break-in on two stations using different sidebands.

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6US REPLACEMENT

If a 6UBA goes up in your gear, try replacing it with a 6CQ tube, much more reliable, says VK3KJ.

HEED MODIFICATION

For you tuckier people who have this excellent piece of gear, G.E. Ham News for September-October, 1960, has some interesting information on improving the performance on a.s.b. If you have access to this publication, do have a look at it. For those of you who do not see G.E. Ham News, I hope to be able to give more details very soon.

CRYSTAL OSCILLATORS

Several of the fraternity, including one a.m. operator, have expressed their delight with the low frequency oscillator shown in the December notes. Do not overlook this circuit when you are designing your new filter exciter or crystal controlled b.f.o.

W5YIN—SILENT KEY

Sidebanders will be sorry to note the passing of Mickey W5YIN, who fought a gallant battle against cancer, but died on October 11, 1960. Mickey was known to Amateurs throughout the world and was the DX Editor of the Sidebander, the S.S.B.A.R.A. Journal.

Correspondence

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

DEAR MR. LARBY

Editor "A.R.," Dear Sir,

I am enclosing a card from ZLSHV and a letter from his (now) widow for your perusal. The late Les Watson was an engineer in World War I and a keen Amateur for many years. He worked all bands and made many friends in VK. He was an inspiration to newcomers to the band. He will be sadly missed by all VKs who ever made a contact with him.

Understandably, Mrs. Watson will not be able to reply to all those who have sent cards.

—L. W. F. Smith, VK1AWE

THE

David Tanner, VK3ZAT
C/o British Nylon Spinners,
Baywater, Victoria.

Once again we have come to the end of our main DX season on the V.H.F. bands. For some time has been quite good, but in the main, not as good as in previous years.

First, let us look at six metres. The season started well with quite a few short skip openings which seemed to auger well for the future. However, things became a lot quieter later on, openings to ZL were rare, even in VK3 and VK4, and other more exotic DX was almost non-existent. The decline in openings to JA and KH8 is certainly due to the decline in the sunspot cycle, but an explanation of the lack of Es openings is still forthcoming.

Activity on 6 metres in some areas at least was less than last year, and this could possibly account for some of the shorter openings being missed. For example, north-south openings during the mornings appeared quite frequently during week-ends and holidays, which indicates that the band was probably open during week days as well. A few more beacon stations such as VK6VK would give us more information on this state of affairs.

So much for 6 m, what about 2 m? The only feature on an otherwise uninteresting landscape was the 6 to 8 m contact between VK3 and VK8. Contact has been made on 2 m since over this path before and could probably be done regularly if skeds were made. Here in VK3, two metres seems to be but a shade of its former self mainly due to the fact that our former active exponents of larger arrays and better gear have left for greener pastures. Around the city at least, one of the participants of the average 2 m station is the antenna, although the construction of a reasonable one, a twelve foot Yagi at least, should be well beyond the means of any amateur. Remember, a large beam, well situated, helps to increase both the transmitted and received signals.

On the 1 m front, new records have been made, once again using stabilised equipment and adequately sized antennas. Work on 1366 Mc. in W. land has also indicated just what can be done using the large antenna, narrow band rx's and also the use of c.w. or s.b. and these same techniques can be equally applied here. How about it? Let's see what new horizons we can open up in the future.—ZAT.

VICTORIA

After an enforced absence due to shifting QTH and then a run of VK trouble, which is still not completely cured, I am back in harness again. Thanks to David 3ZV for carrying on in my absence. Unfortunately my comments are rather brief regarding 50 Mc. as I have only heard rather incomplete openings on this band. Thanks to Maurice Cox and Mac Hillard for their information.

For January, 6 m activity was pretty fair for the number of openings but not for the quality. In new bands, 3.5, 6, 7 and 8 m, 3rd, VK6, weak JA, then VK4 and 6, 4th and 8th brought VK4, 6th, VK4 and weak ZL, 7th, VK4 and XXX, 5th, ZL heard and weak VK4 and 6th, and 3ZV was working in Melbourne by a lucky fate. For the rest of the month, VK4 and VK3 were in and out on quite a few occasions.

144 Mc. Activity died quite a bit after the Contest concluded on 15th Jan. and in particular Bill 3ARZ was conspicuous by his absence. However, after making over 800 contacts on VK3 and 6m, I don't suppose we can begrudge him a rest from Amateur Radio. Incidentally, it wouldn't surprise me if Bill won the Contest with his effort.

On the DX front, nothing unusual until 3rd when David 5AW had a really good signal into Melbourne. David worked quite a few amongst whom were 3AFY 3ALL, 3ZRY, VY, 3ZVZ and 3ZCG. Al 5ZCR was also on deck and stations he worked included 3ZCG and 3ZRY. ZL came through on 17th and worked 3ZDF and 3ZAR. I don't think we can be too far off the following evening but couldn't raise him.

New calls noted lately include 3EA, 3ARF, 3ZGL (ex-3ZAL), 3ZLI, 3AZT and his XYL, 3ZJZ, 3ZLN, 3AAD and 3ZHK at Dandenong.

Frequencies of interest are: 5GJ, 144.55; 5CH, 144.8; 3ZCR, 144.8, 5AW, 144.84; NNN, 144.9; 3S Mc.: George 3ZCG is on the band every Wednesday night at 2000 hrs. looking for Melbourne contacts. 3AUX and 3AAK (280.09 Mc.) hope to keep the Melbourne end going. Jack 3CS is back on this band again and worked 3ZER on the 14th. 3ZCG has been working 3ZER/2 with 5 and 8 signals both ways. George cracks the jack on 143v when he cracks the 3ZCG is back on this band again and worked 5AW with 5 and 6-8 signals and got 5 and 6 from David. The distance involved here is about 200 miles and betters 3ZER/3-5AW which made 100 miles.

Late News.—Watch for VK3ZCG at Broken Hill on 51 Mc. He has been heard and worked from Melbourne during the month.

The Ballarat (144) Moonbeam Project is proceeding well and the antenna installation is very nearly complete.

Jack 3CS will soon be active on 288 Mc. using a 34 ft. long Yagi lent by 3ZAT. Peter 3ZDO is also on 288.16 transmitting only at the moment. 3ZAT has passed the Morse and hopes to obtain SLO in place of 3ZAT.—3ZGF.

50-54 Mc. BAND

At the request of the Institute, the P.M.G. Department has further extended the use of this band by Australian Amateurs until 31st December, 1961.

This approval has been granted on the understanding that if the band or portion thereof is required for television prior to 31st December, 1961, the Institute will arrange for it to be vacated by Amateur Stations within fourteen days of receipt of written request to do so.

TASMANIA

The next meeting of the Tasmanian V.H.F. Group will be on March 15. The January meeting included a talk by Barney TZAK on finding hidden 2 m tx's. V.I.A. re-broadcasts continue on 54.8 Mc. and 54.9 Mc. and will use taken by Alan WYB. Alan lost his modulation transformer while on this job recently but should be back to normal by now.

54 Mc.: DX work the band was too quiet during January. Many locals were away during this time: TZAO and TZAQ in VK3 and TZAI and TZAX also being absent. This conditions may not have been the most of.

On 29th Dec., TZAC was up early, 9:45 hrs. to work VK3. Later in the day VK4 arrived. The new year opened up in the right manner with an excellent opening to all States. TZAC worked 3ZDS, TMY also worked VK8. Other 6 heard but interstate QRM seemed a bit too thick. VK4 was worked on back scatter as they worked ZL. Western VK3, VK3 and 4th, VK4 worked by TZAC. Seemed to be little contact during the day. TZAI and TZAX were heard by TZAI and TZAJ (date uncertain), but couldn't make themselves heard.

Jan. 14 brought VK4 again, followed by a good all-day opening to VK3 and VK4 on the 17th. TZAQ and TZAO being active during the day and joined by others later on. VK3 seems to promise the most significant work here. Hugo 2WZ on this occasion, being as strong as this QTH as a 150w. local 1 mile away. A report in the local press told of the reception of AIRC Channel 17 in Springs (on a communications rx), on the 16th and 17th Jan. However, no sign of the VK3 prefix was heard. QTH was 1700 VZK again on the 18th. JA were heard by TZAI on 22nd at 1030 hrs. but none worked. Darrell 2ZLP popped up consistently at lunch time, as on 24th Jan. VZK worked on 25th by TZAQ brought the month to a close.

Local activity is looking up well. TZAS and TZAK his call sign well established. Michael Jenner, at New Norfolk, is due on 6 m, receiving his own. Michael guarantees David TZAI has the strongest signal on any band, ever in his town. There is also hope to hear TAB from this locale. Ted TZAV is another we'd like to come down to 6 m.

Phillip TZAX, in between hawking soap powder, is on a major re-building job and has spent some time connecting black iron

channels and panels. News from the north tells of the return of TRL at Stanley to 8 m, he hopes to be able to repair a damaged 4 el. Yagi soon. hope it reaches down south sometime. Reg. I believe skeds have been arranged between 3ZLE and TLE on 80 Mc.—results unknown down here at the moment.

144 Mc.: Two metres is missing out badly right now, but should have some comers later on in the year. We'll have to make an effort to bridge the gap between Hobart home stations to Launceston and the North West Coast both on 2 and 8 m. It may be a matter of hitting the right rocks on some of those 5,000 feet mountains. David TZAI will be operating portable on King Island during late February and possibly early March, looking for VK3 and VK7 contacts.

288 and 578 Mc.: One metre activity still hinges on mod. ones. TZAI, running a 100w. one using a QEQ06/40 TZAQ has a crystal controlled mobile in operation.

578 Mc. is at last kicking off. TZAI has gear going as have TZAO and TZAQ. Also interested are TZAK, TZAJ and TZAS.

Noticed TZAI and TAS snooking around likely places in search of gear for 8,600 Mc. When, 117—TZAO.

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SWL

Maurice Cox, WIA-L3055
Flat 1, 97 Boyd Crescent,
Olympic Village, Heidelberg,
N.33, Victoria.

We, the office-bearers of the VK3 Group, are very disappointed in the poor figures at the Group meetings. These meetings, in case you don't know, are held on the last Friday of each month at the rooms, 478 Victoria Parade, at 8 p.m.

I myself, have noticed that new members come along for one or two meetings and then we don't see them again. Why? I would like to know. After all, the Group is for you and your hobby, why not practice it, tell me why you don't come any more; write me a letter, tell me what your gripes are, better still, come to the meetings and tell me.

You know, chaps, I have a feeling that it is, dry meetings, too much talk and not enough action; nothing for you to do but just sit and listen to a lot of things that don't interest you, is that it?

So it's up to you boys to tell me and we will do something about it. Soon, I hope, with approval we will be able to have our own receiving station at the rooms. So keep your fingers crossed.

Quite a few visits have been arranged for the next few months to keep your eyes and ears open for further details.



My personal thanks go to Ian Woodman for the splendid work he has done in arranging these for us.

Another matter is that of news. I always welcome letters from anybody, no matter who or where you are, every letter is answered personally, and if your letter contains something of interest to the other s.w.l.'s I'll write it up in this page. Furthermore, I wish to thank all those who do write to me and there are a lot of you. Thanks again, chaps.

VICTORIA

We still plug along creating new members. There have now been issued 131 listener notice books. Incidentally, if any VK3 S.W.L. would like some QSL cards, just write to me and I'll forward some to you. These cards were printed by the Victorian Government Tourist Bureau. They are a very nice coloured card, a beautiful scene of Melbourne and the details for us on the back. There were a few errors made in the printing process, but they are easily overcome. I have sent out 10 already, the most I have emitted in 18 months.

Bert Stebbings spent his holidays at Den-Miquin. Bert said it was very hot, no fishing, as spent eight hours a day listening on 8 m, then found out converter on the blink. Sorry to hear that Bert. We hope you have better luck on your next DX expedition.

SOUTH AUSTRALIA

The Group has been very inactive, but on Jan. 18 a meeting was held to bring the Group back to living again. Harry L5026 is at present constructing a 7 valve rx and will most

probably enter the N.F.D. Contest (best of luck, Garry).

Colin will be on leave, but his brother Trevor is entering a log. Dale L5025 is having bug trouble with his No. 11. Colin has logged a new country—KWIAL. He tells me he has a 522 rx on the way from Melbourne for use on 2 m. Colin received a letter from Bob Simmonds, of Iron Knob, and Bob has put up the WOVVO all-band antenna and he says it has very much improved reception on his 1155 rx. Colin would like circuits for 10, 15 and 6 m converters—who can help? Thanks for the news, Colin.

TASMANIA

Michael writes with a query and wants to know what to do with members who live a long way from meetings? Michael, write to them with news of your activities down there. Keep in touch with each other; take note, you VK3 S.W.L.'s, write to your Secretary with your activities, he can write them in a letter to me for inclusion in the S.W.I. Notes.

Next month I'll give a list of VK3 S.W.I.'s and their gear and give them each month after that for other States, so you S.W.I.'s can write me and tell me what gear you use, plus the antenna.

CORRESPONDENCE

I have received correspondence from the following: Don Grantley, L3048; Eric Trebilcock, BE2S-103, L3042; Howard Harvey, L5034; Harry Major; Graham Rutter, L3001; Chas Abernethy, L2211; Peter Horn, LZ337, soon to be a VK3 member.

John Walker, VK3, what a mail! Some of these guys write twice a month—I like it! Once again I repeat, anybody can write to me about their activities, the gear they use, plus antenna, don't be frightened. Don't forget your QSL ladder scores, send them no matter how big or small.

Howard Harvey, L5034, of 27 Wainhouse St. Torrensville, Adelaide, has quite an antenna farm.

At the top is a 5 x 5 beam for 288 Mc., then a 7 element beam for 144 Mc. Just visible at the bottom of the photo is a 1 metre ground-plane. A two element beam for 6 metres was added below the 2 m beam after the photo was taken.

30 metre two element beam (director app. 30 ft., spaced 0.1 wavelength apart) and dipole of 33 ft., a 40 metre dipole is shown above the beam, but this has now been replaced with new dipole coming from the point where the upper guys are attached to mast.

Eric says he has a plan. He's got to keep looking ahead two weeks or so. Do you know what, he only listens as best he can and believe it or not, guess what? The DX is at its highest. What a plan, I do not know how you do it, Eric.

I met him the other night, he had just collected 80 QSLs for the month. He tells me he had a good Xmas, did a lot of travelling, had his mother over from VK3—41 years old and completed her 30th birthday. How about that, good for her. Eric's Federal QSL log is nearly finished. Ray is back now. Last month was Eric's busiest, 4,600 cards (one for me).

In 1960 he mailed 1,875 reports, received 816 QSLs from 155 countries and 37 zones, heard 176 countries in 40 zones; 49 zones on 40 m. Up till 15/1/61, he had mailed 34 reports and has 14 QSLs from 8 countries and 9 zones. His all-time scores: 275 countries, 45 zones heard, with QSLs from 239 countries plus 40 zones. Thanks Eric for that information, very good. My mate, Donald Grantley, is next. He did not do very well at Albert's 6 m Xmas in the R.H. Contest. He got into the Xmas break though just as it finished. Obtained about 50 points and heard on VK3. He has a 6 m JA (transmit) on the beam. Don! He's put a co-ax. input on the AR in lieu of plugs, restored the S.B.S. mixer circuit to the original QSL. This improves the stability of the osc. and then he peaked the coil boxes again on the phone DX section. Other than 10 m, which hit the c.w. net, as this is the best JA converter. He obtained two 40 ft. Oregon 4 x 4 inch masts and is going to erect an end-

fed Zepp, 66 ft. long at about 45 ft. He's given me the gen on a vee beam, 33 ft. long each each, 90 degree angle (no less) and fed with open wire feed line.

On awards, Don says a s.w.l. version of the two W.I.A. awards on p. 13 of Jan. "A.R." would be the "ant's pants." I'll look into it. Don. Latest from Don is that his AR7 is under the bench and he is now using a Marconi R1155—more from him next month.

Howard Harvey, L5034, of Torrensville, writes me that he is nearly 71. His rig is a dual wave rx with additions and modifications for tuning 40, 20, 15 and has converters for 8 and 1 m. His antennae are: 40 m half wave centre fed dipole, 30 ft. high, 20 m two element beam, 30 ft. high, 15 and 10 m double dipole, 30 ft. high, 8 m two element beam, 21 ft. high, 2 m x 7 element Yagi, 32 ft. high; and 1 m x 3 x 5 (vertical, polarised), 27 ft. high. Want an antenna farm and his photos on this page prove it. He has yet to build rx's for 2 and 6 m, but he's still at school. Also he will be getting a new rx soon—180 to 10 m. He has not been active much, only logged 58 QSOs, but has QSLs by report to 80 countries. More from Howard next month.

Harry Major is an old hand; his early s.w.l. was done on a 1 valve adaptor plugged into an ordinary radio set. It was rather hot and enclosed in a metal case with a good earth.



so as not to cause any interference. With two audio stages, it brought in dozens of overseas stations—hundreds of local Amateurs (not like now, Harry).

At the moment, he has a six valve, also spends a lot of time playing around with a 3 valve super regen originally designed for 144 Mc. and he's been trying out coils for the lower frequencies, but he's not having very much success. He wonders if the Editor of "A.R." could arrange some articles on simple s.w. sets for young beginners. It would help the younger lads to get started.

Graham Rutter, L3091, is in a one-hour town called Peabridge, in the C.S.I.R.O. Division called Meteorological Physics. His only link with the outside world is a transceiver which often won't load when one wants to use it. Birds and the antenna a good rusting place and by the time he's ready to use it each day, he doesn't have a sky-hook, kit. Equipment is a BCF11F and 122. The 122 is often on the coast guard and light station frequencies having QSO with the Met. Station on Neptune Island. He wishes he had a rx, the locale is good, no noise and high up. Hunting is 122 best and he's going back buying bullets to feed the rabbits with there's so many of them. Save the money, Graham, and buy a rx'er.

Judging by what I have written here, I think I've used all my space. So I'll have to finish up now and write about Peter Horne and Chas Abernethy next month.

There is no alteration to the QSL ladder, so will not include it. Till next month, this is your scribe going QRT, best of DX, 73, Maurice.

FEDERAL

Fed. President: G. M. Hull, VK2ZS.
Fed. Asst. Secretary: W. Mitchell, VK3UM.
Box 2811W, G.P.O., Melbourne, C.I., Vic.
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New South Wales—Perc Henay, VK2APQ.
Victoria—Auan Elliott, VK3AEL.
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South Australia—L. H. Funnell, VK5AX.
Western Australia—Ron Hugo, VK6KW.
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QSL Bureau. R. E. Jones, VK3R3, 23 Landale
 Street, Box Hill, E.11, Vic.
Awards Manager. Alf Kinsick, VK3KB, 1 Mac-
 Farland Street, Brunswick, N.10, Vic.

NEW SOUTH WALES

President. W. J. Lewis, VK2YB.
Secretary. Norm Beard, VK3AL, Address mail
 to Rooms at 14 Aclison St., Crowe Nest,
 N.S.W.
Meeting Night: Fourth Friday of each month at
 Science House, Gloucester Street, Sydney.
Divisional Sub-Editor. Ted Whitting, VK3ACD,
 15 Loudon Street, Five Dock.
QSL Bureau. R. J. Mitchell, 81, Crowe Nest,
 Frank Hine, VK3JL, Manager, assisted by
 Allen Smith, VK2AIR.
Zone Correspondents. North Coast and Table-
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 West Kempsey: Hester Branch: R. W. Rose,
 VK2AGR, 17 Brooks St., West Wallendene.
 Emerald: J. J. Lanks, H. Rawlins, VK-
 2YL, 9 Comfort Avenue, Cessnock.
 Sutherland: S. J. Wicks, VK2VW, Forber.
 Coast & Southern: E. Fisher, VK3JD, 2 Oxside
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 VK3AJQ, Wallasey St., Cootamundra.

FEDERAL

90-54 Me. BAND

At the request of the Institute, the P.M.G.
 Department has further extended the use of
 this band by Australian Amateurs until 31st
 December, 1961.
 This time there has been granted on the under-
 standing that if the band or portion thereof is
 required for television prior to 31st December,
 1961, the Institute will arrange for it to be
 vacated.
 The following are the conditions for the four
 days of receipt of written request to do so.

— —

FEDERAL QSL BUREAU

Sadly, perhaps, this Bureau reciprocates
 Section's Greetings received from the "DL",
 "OR" and "Y" sections.
 New address for the Cuban QSL Bureau is:
 Apartado Postal Num. 6966, Habana, Cuba.
 By the time these notes are read, the c.w.
 section of the 1961 R.E.F. (Franchi) DX Contest
 will have been held. However, the phone
 section will be held from 1400 G.M.T., 15th
 April, to 2400 G.M.T., 18th April. Code is R/S
 plus three-figure number of contact. Score 1
 point for each French station contacted (France
 or Colonies). Multiplier is each French station
 or each overseas country. Total score is
 points multiplied by multiplier. Scores to be
 forwarded to R.E.F., B-P, 42-01, Paris, R.F.
 France (closing date not stated).

So successful was the Boy Scouts' Jamboree
 on the Air, 1960, that already the week-end
 of 21st and 22nd October has been set aside
 for the 1961 event. Full details at a later date.
 The Executive Commissioner of the Boy Scouts
 International Bureau, Ottawa, Canada (VE-
 3JAK), desires to thank all those Ham's who
 assisted in the 1960 event.

The QSL Manager of the Oklahoma Amateur
 Radio Club has sent details of the Club Award
 given for contacts with K1W stations. In claim-
 ing the number of contacts required is de-
 termined by the Zone in which the claimant
 is located. Further details from the Federal
 QSL Manager, W.I.A.

As this is probably the last time I will be
 writing notes for this column (Jan VK3R3 is
 due back home early February), I desire to
 thank those who have commented favour-
 ably on my efforts.

23, Eric Trebilcock (BRSS-195), Acting Fed-
 eral QSL Manager.

NEW SOUTH WALES

The month of January is the most important
 one in the year of the N.S.W. Division of the
 Wireless Institute owing to the fact that the

NOTES

VICTORIA

President. D. A. Wardlaw, VK3ADW.
Secretary. M. J. Owen, VK3EZO.
Administrative Secretary. Mrs. Bellaire, 478
 Victoria Parade, East Melbourne, C.2. Postal
 address: P.O. Box 26, East Melbourne, C.3.
Meeting Night. First Wednesday of each month
 at the Radio School, Royal Melbourne Tech-
 nical College.
Divisional Sub-Editor. F. D. Williams, VK3HZ.
QSL Bureau's Inwards and Outwards—W.I.A.,
 Vic. Div., P.O. Box 26, East Melbourne, C.2.
Zone Correspondents: Westerns: W. J. Kinsella,
 VK3AKW, Magdalla, Lubock; South Westerns:
 D. G. Saulch, VK3AKN, "Toronga", Broad-
 way, via Port Fairy; Far North Westerns:
 M. Folle, VK3GZ, 101 Lemon Ave., Mildura;
 Melbourne: R. Jonsson, VK3KD, Farnsworth
 St., Castlemaine; North Easterns: T. C. Ten-
 nant, Park Rd., Tatura; Easterns: J. F. Ryan,
 VK3ZBH, and F. D. Veight, VK3ZGV.

QUEENSLAND

President: W. J. Ratler, VK4PR.
Secretary: B. J. Armstrong, VK4SA, Box 638J,
 G.P.O., Brisbane.
Meeting Night: Fourth Friday in each month at
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 Street, Brisbane.
Divisional Sub-Editor: W. J. Ratler, VK4PR,
 Willandra St., Alderley, Brisbane.

QSL Bureau: Jack Filds, VK4JF, Vanda St.,
 Buranda.

Zone Correspondents: Maryborough: R. J.
 Glasson, VK4RG, 30 North St., Maryborough,
 Tawseville R. K. Wilson, VK4RW, Hogan
 St., Stuart, Townsville.

SOUTH AUSTRALIA

President: L. F. Brice, VK5OK.
Secretary: J. C. Haseldine, VK5JC, Box 1234K,
 2 P.O., Adelaide, Telephone 34 95.
Meeting Night. Second Tuesday of each month
 at St. Paul's Church Meeting Room, Cor-
 ners Flinders and Rundle Streets.
Divisional Sub-Editor: W. W. Parsons, VK5PS,
 10 Victoria Ave., Rose Park, S.A.
QSL Bureau: G. Luxton, VK5RX, 23 Belair Rd.,
 West Mitcham, S.A. (Inwards & Outwards).

WESTERN AUSTRALIA

President. Cole Sangster, VK6CS,
 5 Edgington, VK6LS, Box N1003,
 G.P.O., Perth, W.A.
Meeting Night. Third Tuesday of month at
 Mernda Street Hall, South Perth.
Divisional Sub-Editor: P. Haywood, VK6PH, 2
 Barnard St., Queen's Park, W.A.
QSL Bureau: Jim Rumble, VK6RU, Box 7219,
 G.P.O., Perth, (Inwards and Outwards).

TASMANIA

President: T. Allen, VK3AL.
Secretary: K. E. Mullin, VK3EA, Box 88J,
 G.P.O., Hobart.
Meeting Night: First Wednesday of each month
 at 17 Clifton St., Liverpool St. Hobart.
Divisional Sub-Editor: I. Nichols, VK3ZE, 9
 Cressy St., New Town.
QSL Bureau: J. Stanger, VK3JE, 29 Willow-
 dene Ave., Launceston, Hobart.
Zone Correspondent: North Western Zone—
 Terry Tonges, VK3TT, Northern Zone—Ray
 Waldon.

Annual Convention is held at Dural on the
 Saturday of the Australia Day week-end.

This year the Eleventh Annual Convention
 was opened by the monthly meeting at Science
 House, Gloucester Street, where there was an
 attendance much lower than was ex-
 pected. Some, no doubt, are still fortunate
 to be on leave, others working, while yet a
 large proportion of our members who used
 to have found the attraction of the tv. screen
 too much for them with the effect that they
 are no longer seen at meetings as regularly as
 in days of yore.

Those who did attend, however, heard an
 interesting lecture on Frequency Shift Keying,
 ably given by John Crocker of the Depart-
 ment of Civil Aviation. This is yet another
 of those interesting addresses which have
 been arranged by Harold ZAAH, and in his
 lecture, John gave us an insight into this type
 of transmission which is being widely used
 by his Department in their communications.

network, John roused considerable interest in
 his subject and was quizzed following the
 lecture on some of the finer points of the system.
 The vote of thanks which followed was moved
 by Bob ZYL and was passed in the usual
 manner.

Discussion followed, mainly initiated by Barry
 ZAAH, on the prospect of this mode being per-
 mitted on our frequency plan. The future of this
 matter is being pursued and more will be
 heard on the subject at a later date.

As usual, the meeting there was little
 discussion on the usual matters which is nor-
 mally conducted on the footpath, no doubt meet-
 ing is wished to make an early start on the
 big day following.

It is well to remind members and others
 interested, that on the second Friday of the
 month there is the mid-monthly meeting which
 is held at 14 Aclison St., Crowe Nest, for
 which meeting some interesting lectures and
 displays are being arranged. Details of this
 meeting are always to be heard in the weekly
 broadcast from VK3WL. So fellows, make it a
 night each month, every month.—A.C.D.

HUNTER BRANCH

This being the month to change or not to
 change your local officers, how about you pre-
 senting yourself for duty. I doubt if anyone
 will object to step down in your favour and
 as Lord Byron said, "Give it so—you have
 know." The meeting night is 18th March at the
 University of M.S.W., Tighes Hill, at 4300 hrs.
 An added incentive, it is proposed that
 Harold ZAAH will be there to talk about an-
 tennae and those who heard his previous tran-
 sistor story will need no coaxing along. If
 Divisional President is coming, and we hope
 he is, maybe he had better wait.

The 'Dural Do' for 1961 is now behind us—
 I broke all records to be there in time to hear
 a particular lecture, but found that the chap-
 had taken unbridge and decamped. A pity
 these things happen, but apparently you can
 catch a trip to Dural but you can't keep him
 from disposals.

Noticed walking around the grounds were
 VK6 CS, VK2, JAKX, 2AFA, 2BJ, 2AYL, ZEDF,
 ZPF, ZFF, ZKT, ZAK, plus Messrs. Sutherland
 and Macdonald. When I arrived, the chap-
 that they must have heard me coming as the
 gates were locked but was able to persuade a
 gentleman in a down and wig to squeeze my
 car in a corner. I must say the grounds pre-
 sented a vast improvement to last year and I
 was close by to the points-on. Last time I was
 carried so far every time when I went out
 get my tea, I arrived back in time to go home.

Harking back to the forenoon gent in wig,
 etc., I was astonished to see that it was F.C.P.
 J.A. and I think that the chap who called
 Perc APQ who had only been appointed to



"That's funny, the ignition has stopped all of a sudden."

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hope that the news will be good news. The Elizabeth club station, ELZ, will be operating in the Field Day and a 5 mhz station will be working as well, so the gang will be looking to the city for some 8 mhz portable/mobile contacts. Naturally as you read this, it will be stale news, but I have no conscience where people for VKS is concerned!

Probably it is my grey hair, or perhaps it is the way that my mind works, but I feel I am a deceiving air of wisdom, but it is remarkable how often I have been asked if there is any cure for VKS who will produce in chattering, reading little bits out of the paper, and wanting to discuss what happened to the band from the grocery bill last week. Just when I am about to start to open my mouth, I admit to there being many such cures, I just stress the point that open resentment by snarling, swearing, or even throwing one's call sign book on to him does not in the least disgust will get you nowhere, in fact it will more often than not lead to quarrels, tears, door slamming, even pecking of suit cases and the threat of going home to mother. Not knowing of any sure cures, I can only give my method in the hope that it will work for you as it did for me. When I am arriving, I am showing signs of coming good, I simply stand on a suitable chair and look her straight in the eyes and utter her name in a firm, very severe tone. This usually works very well, although there have been occasional times when I have missed the band opening entirely because the ambulance was late in arriving, and sometimes the stitches have taken the doctor a little time to fix up. Some of the gang have been starting to come in, but not switching on the rx at all, but this I regard as sheer cowardice, don't you? By the way, have there been any band openings lately?

For almost 13 months now the VKS Division has sported themselves a Journal. Posted out to the members at an interval of 10 days, it has killed good-will west of both the city and the country members. Improving each issue, it is a credit to all responsible, especially the Editor, Ken, who should be given credit for his little paper, and as much as I dislike Editors and their little red pencils, I cannot bring myself to withhold praise when it is so deserved. In the 13th issue, I saw that this magazine ("A.R.") saw fit to reprint recently a paragraph from the Journal, and gave credit as well. Can VKS ask for any more?

Checking these notes before putting them to bed for this month, I am somewhat ashamed to note that quite a deal of "padding" is apparent in them. However, with no news from my spin in Mount Gambier or Renmark to hand, I feel that I am justified in allowing my imagination to run riot in an endeavour to keep the Editor of more or less the VKS. The Editor, bless his little red pencil, will probably be so dehydrated following his trip to Alice Springs, that he will lack the energy to take the necessary action, plus the fact that he is well aware that I am of too modest a nature to impose on his noble generosity. Just as well then, I am not the present Editor, he took some bluffing, the tyrant. Still, what could one expect from someone who gave credit to the other wave listeners to save tipping the dustman! Viva VKS!

WESTERN AUSTRALIA

Well chaps here we are again after an absence of one month. I had a very nice holiday and worked lots of portable. The reception district was everywhere, but the QRM was could, there was no QRM and the Eastern States all roll in 5 x 9 plus. I would certainly like that up here at our QTH. Other calls heard portable were Herb, Ted, E.G., G.H. and B.W.D. conversing at Waterman's Bay. Francis still has quite a bad throat by the sound of his voice, but the visiting brings him cheers and 73 from the gang on the OW band.

It does not look as if 1961 has got off to a good start at all, with the breach between the two V.H.F. Groups appearing to be growing wider, owing to certain people on each side holding grudges of what happened back in 1960, and of their pig-headedness to 1961.

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Both the names of the V.H.F. Group and the W.I.A. are well known, and the fact that the group should want to change the name of the other in any way, I feel agreement could be reached to the benefit of both parties with both names retained in one another. Quote: "Together we stand, etc."

The V.H.F. Group gives the W.I.A. a reason for not wanting to be included in the band that is that certain members of the Council of the W.I.A. are not liked by them, owing to their supposed dislike of the V.H.F. Group and of the things they have done. I have been in the V.H.F. Group in the past. All members of the W.I.A. Council were elected by all members of the W.I.A. some of whom are members of the V.H.F. Group. It is known that most of the members did not cast votes, therefore it was assumed that each and every member who did vote would vote for the V.H.F. Group. I did not, I feel sure they would have voted against, seeing as some Council members have been in office for many years. These men have devoted many of their leisure hours to the promotion of Amateur Radio and the only remuneration they receive is the "Progress" of our "Great Hobby". Yet some members on the outside who are not prepared to devote any of their spare time to the administration of the Institute but criticise the way in which it is run.

To these members I say it is in your power to rectify this by taking some personal interest in our "Great Hobby". I am sure that a greater number of members and newer members took a more active part in both the W.I.A. and V.H.F. Groups, the older members of each group would be forced to come out of the wood into the future and leave their grudges back in 1960 where they belong and a sensible agreement reached as to the future of Amateur Radio in W.A.

In conclusion, it should be noted that this is the only State in which the Amateurs are divided administratively.

Again I have not received any news from country Amateurs or city Amateurs regarding their activities for the past few months. These notes are very hard. Have a look at VKS notes and let us see if we can get out to sound like theirs instead of the tone our notes have taken.

Well chaps, after this outburst, I suppose this is the last time I will be asked to write the notes, but I will do it. I will be glad to ALI, get together as one body, for the future of Amateur Radio as a whole, so I hope this does some good.—EPH.

TASMANIA

Those members who helped with the Scout Jamboes in the month of January, I think that boys from the Hobart area met in person both Amateurs who assisted in other States, and boys who spoke for our State. The meeting took place at the Jamboes in VKS early in January this year.

Bill TTY became established at Bond Bay, Port Davey, as from 1st February, 1961, for a period of three months. Bill can be heard on both 3.5 and 1 Mc., as well as under the call sign ETAC at the appropriate out-station frequency.

The Club Room Fund-raising Committee held two functions in the month of January. One function was a hidden treasure hunt. The other was a barney. The barney was held in the Club Room and was a success. The Committee is delighted at the increase in barney funds. The success of the function, and by way of mobile gear shown at this function, and we encourage all members to do something about both forms of activity. In excess of £51/10/0 was raised for the Fund. The second function was a social evening to hear a tape from George GHP dealing with the title being my own. Humour, knowledge and an ability to reduce that knowledge to a level understood by the intelligent listener, this is a lecture truly memorable. Dr. Reyer expects to visit Tasmania for several years, so we confidently look forward to further absorbing addresses from him.

Remember the Annual Dinner to follow the Annual General Meeting on 25th March. This year, a lady partner for each member can be brought, and we have had a dance, flowers, music, dinner and supper taken care of, in addition to the usual forms of conviviality. So come and make this dinner an occasion to remember.

Band conditions have been generally poor for the last month, that for the bands 20 Mc. and below. With static lessening, however, the 3.5 Mc. band is becoming really the most satisfactory of them all, and I was delighted to work VKS on that band on 3rd Feb.

We were very pleased to welcome Dennis TDR and Harold TME to our February meeting. Chien BVIRP hopes soon to visit Australia, and is looking forward to meeting with the hope of meeting the operators personally in the not too distant future.—TZZ.

NORTH WESTERN ZONE

Disastrous news! Our President, Max TXM, got himself some rare DX last month in the form of "Mumps". Sincerely hope you are recovered Max and none the worse for the ordeal.

We had a x hunt in January, which was usual was run in two sections. Syd TBY was duly hidden away and transmitting very loudly at the appointed time for the first run, and George TXL was not a great while in "venting" him out. All participants were soon on the scene and adjourned to the main house area at Ulverston for a picnic dinner. George had a very secluded hideout for the afternoon run, amongst all the blood-sucking wasps imaginable. Anyway, more by good luck than anything, yours truly found him first and had to hide for first run on 18th Feb., but more of that later.

The radio control units, etc., for the Burnie Fire Brigade are at last giving full assistance to the Brigade and everything in the garden appears slowly opening up. Len TTF for the finishing touches he carried out.

Our first meeting for the New Year was held on 7th Feb. and 14 members were present. You can well imagine there was plenty to talk about after the Xmas break (Sapper was as usual, and after a small auction affairs were wound up reasonably early. I believe quite a number of members are contemplating visiting Hobart for the Annual Dinner later this month.

Haven't heard many of the local chaps on the air over the last few months, though I can listen most nights. Dennis TDR was as usual, and after a small auction affairs were wound up reasonably early. I believe quite a number of members are contemplating visiting Hobart for the Annual Dinner later this month.

Bob TZAA hopes to be on 6 mhz very shortly; you'll be able to have a real local QSO George TXL has been working on the 10 mhz band from our fair city, so he must have the rig somewhere near a power point. George TXL has been seen, and was heard transmitting from a friend's QTH in VKS last night. I called on Max TXM one night and found him at his favourite part-time of swapping yarns with some of the boys a few words, too. See you all at the dinner.

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